



MICROSOFT TRAINING

Wireless Comms System Course

Master wireless communication systems, covering design, deployment, and security. Gain expertise in Wi-Fi, Bluetooth, and cellular technologies.

DURATION

40 hours

LEVEL

Intermediate

FORMAT

Instructor-Led

- Globally Recognized Certification

- Expert-Led Hands-On Training

- Flexible Scheduling

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COURSE OVERVIEW

The Microsoft Wireless Comms System Course is an intermediate-level program designed for IT professionals seeking to master the intricacies of modern wireless communication systems within a Microsoft-centric environment. This intensive 40-hour course delves into the fundamental principles of wireless networking, covering essential topics such as Wi-Fi standards (802.11a/b/g/n/ac/ax), Bluetooth, and the integration of cellular and IoT connectivity. Participants will gain practical skills in designing, implementing, securing, and troubleshooting robust wireless infrastructures.

Through a blend of theoretical knowledge and hands-on exercises, you will learn to configure wireless access points, manage client connectivity, and implement advanced security protocols using Microsoft technologies like Network Policy Server (NPS) for RADIUS authentication. The course also explores the critical aspects of integrating wireless networks with Microsoft's cloud services, including Azure IoT Hub for device connectivity and Microsoft Intune for mobile device management, ensuring a holistic understanding of contemporary enterprise wireless solutions.

Upon completion, you will be equipped to optimize wireless network performance, resolve complex connectivity issues, and safeguard data transmission across diverse wireless platforms. This expertise is crucial for supporting a mobile workforce, deploying secure IoT solutions, and enhancing overall network resilience, significantly boosting your value as an IT professional in an increasingly connected world.

Duration	40 hours
Level	Intermediate
Vendor	Microsoft

COURSE CURRICULUM

01 Module 1: Wireless Fundamentals and Microsoft Integration

- Radio Frequency (RF) Principles and Spectrum Management
- Key Wireless Standards: 802.11 (a/b/g/n/ac/ax) and Bluetooth
- Overview of Wireless Network Topologies and Architectures
- Understanding Microsoft's Role in Wireless (Windows Networking, Azure, Intune)

02 Module 2: Wi-Fi Network Design and Implementation

- Wireless Site Survey and Planning Methodologies
- Access Point (AP) Deployment and Configuration
- Antenna Types and Placement Strategies
- Channel Planning and Interference Mitigation
- Basic Routing and Switching Concepts for WLANs

03 Module 3: Wireless Security and Authentication

- Wireless Encryption Protocols: WPA2-Personal/Enterprise, WPA3
- 802.1X Authentication and EAP Methods
- Configuring Microsoft Network Policy Server (NPS) for RADIUS
- Implementing Guest Wireless Networks and Captive Portals
- Wireless Intrusion Detection and Prevention Systems (WIDS/WIPS)

04 Module 4: Advanced Wireless Features and Troubleshooting

- Quality of Service (QoS) for Wireless Applications

- Fast Roaming Protocols (802.11k/v/r) and Client Optimization
- Wireless Network Monitoring and Analysis Tools
- Troubleshooting Common Wireless Connectivity and Performance Issues
- Power Management for Wireless Devices and Infrastructure

05 Module 5: Integrating IoT and Mobile Devices with Microsoft Solutions

- Fundamentals of IoT Wireless Protocols (e.g., Zigbee, LoRaWAN - connectivity aspects)
- Connecting IoT Devices to Azure IoT Hub via Wi-Fi and Gateways
- Mobile Device Management (MDM) for Wireless Clients using Microsoft Intune
- Securing Mobile and IoT Endpoints on Enterprise Wireless Networks
- Best Practices for BYOD (Bring Your Own Device) Integration

CAREER PATHWAYS

Graduates of this program are prepared for the following roles:

- > **Enterprise Wireless Network Specialist**
- > **IoT Connectivity & Device Management Engineer**
- > **Cloud Network Integrator (focused on Azure & Wireless)**

FREQUENTLY ASKED QUESTIONS

Q: What specific Microsoft technologies will I learn to configure and manage in this course to enhance wireless communication systems?

This course provides hands-on experience with key Microsoft technologies critical for modern wireless environments. You will learn to configure and manage Windows Server Network Policy Server (NPS) for robust RADIUS authentication, integrate wireless devices with Azure IoT Hub for scalable IoT solutions, and leverage Microsoft Intune for comprehensive Mobile Device Management (MDM) across your wireless client base. The curriculum focuses on how these Microsoft services interact with and enhance your overall wireless infrastructure.

Q: How does this course specifically prepare me for managing and securing wireless networks in an enterprise environment that heavily utilizes Microsoft's cloud services?

This course is tailored for professionals operating in Microsoft-centric enterprises. It specifically trains you to integrate secure wireless access with Active Directory for user authentication, extend your network visibility and control to cloud-connected devices via Azure IoT services, and ensure compliance for mobile devices using Intune within your wireless infrastructure. You'll gain practical skills to design, deploy, and troubleshoot wireless solutions that seamlessly interoperate with and leverage your existing Microsoft cloud investments, leading to more efficient and secure enterprise operations.

Q: What prior networking knowledge or certifications are recommended before enrolling in this intermediate-level Wireless Comms System Course?

While there are no mandatory prerequisites, an intermediate understanding of general networking concepts is highly recommended. Familiarity with TCP/IP, basic routing and switching, and foundational knowledge of Windows Server environments (e.g., Active Directory concepts) would be beneficial. Prior experience with a foundational networking certification like CompTIA Network+ or CCNA would provide an excellent base, though it is not strictly required.

ABOUT COMPUTER PRIDE



East Africa's Premier IT Training Center

With over 15 years of excellence, Computer Pride delivers globally recognized certification programs from leading technology vendors. Located on Kenyatta Avenue in Nairobi's CBD, our state-of-the-art facilities and expert instructors have empowered thousands of professionals across East Africa.

15+

Years of Excellence

10,000+

Professionals Trained

50+

Vendor Certifications

READY TO ENROL?

Take the next step in your technology career.

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